

WHAT IS CLAIMED IS:

1. A method for measuring an inner size of an object to be measured by irradiating the object to be measured with a radiation radiated from a radiation generating source and by detecting the radiation transmitting the object to be measured by a detector, the method for measuring a multilayer structured container comprising:

making the radiation generating source, a slit, and the detector perform a linear scan relatively to the object to be measured in an orthogonal direction to a same straight line in addition to disposing the slit which narrows down the radiation transmitting the object to be measured in front of the detector and disposing a focal spot of the radiation generating source, a center of the slit, and a center of the detector on the straight line; and

measuring the inner size of the multilayer structured container as the object to be measured based on a relationship between an intensity distribution curve of damping on transmission obtained by the detector and a scan position.

2. A method for measuring an inner size of an object to be measured by irradiating the object to be measured with a radiation radiated from a radiation generating source and by detecting the radiation transmitting the object to be measured by a detector, the method for measuring a multilayer structured container comprising:

making a slit and the detector perform a rotational scan relatively to the object to be measured, having a focal spot of the radiation generating source as a center, in addition to disposing the slit which narrows down the radiation transmitting the object to be measured in front of the detector and disposing the focal spot of the radiation generating source, a center of the slit, and a center of the detector on a same straight line; and

measuring the inner size of the multilayer structured container as the object to be measured based on a relationship between an intensity distribution curve of damping on transmission obtained by the detector and a

scan position.

3. A method for measuring an inner size of an object to be measured by irradiating the object to be measured with a radiation radiated from a radiation generating source and by detecting the radiation transmitting the object to be measured by a detector, the method for measuring a multilayer structured container comprising:

using a radiation generating source having a line-shaped focal spot of a predetermined length as the radiation generating source;

- disposing a slit which narrows down the radiation transmitting the object to be measured in front of the detector;

making the slit and the detector perform a linear scan relatively to the object to be measured along a direction of a length of the line-shaped focal spot of the radiation generating source; and

- measuring the inner size of the multilayer structured container as the object to be measured based on a relationship between an intensity distribution curve of damping on transmission obtained by the detector and a scan position.

4. A method for measuring an inner size of an object to be measured by irradiating the object to be measured with a radiation radiated from a radiation generating source and by detecting the radiation transmitting the object to be measured by a detector, the method for measuring a multilayer structured container comprising:

using a linear sensor having a line-shaped detecting portion of a predetermined length along a direction of a length of a line-shaped focal spot of the radiation generating source as the detector in addition to using a radiation generating source having the line-shaped focal spot of a predetermined length as the radiation generating source;

- disposing a slit which narrows down the radiation transmitting the object to be measured in front of the detector;

making the slit perform a linear scan to the object to be measured

along the direction of the length of the line-shaped focal spot of the radiation generating source; and

measuring the inner size of the multilayer structured container as the object to be measured based on a relationship between an intensity
5 distribution curve of damping on transmission obtained by the detector and a scan position.

5. The method for measuring the multilayer structured container according to any one of claim 1 to claim 4, wherein

10 the slit is a double slit with two slits being disposed on a front and a back of a same beam line.

6. The method for measuring the multilayer structured container according to any one of claim 1 to claim 5, wherein

15 the object to be measured is a multilayer structured container having a cylindrical or a spherical container peripheral wall,

said method further comprising:

irradiating with the radiation substantially in parallel to a tangential direction of the cylindrical or the spherical container peripheral wall;

20 detecting the radiation transmitting the container peripheral wall by the detector; and

measuring a thickness of each layer or a space between layers of the container peripheral wall based on the intensity distribution curve of damping on transmission.